

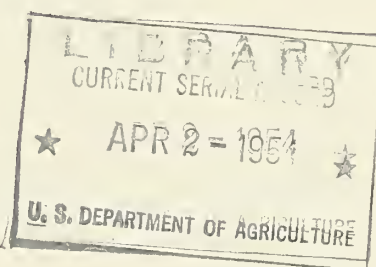
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MARKETING ACTIVITIES



U.S. DEPARTMENT OF AGRICULTURE

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Poultry Efficiencies

Increase Consumption

By Dr. Edwin H. Matzen

The per capita use of poultry and eggs has increased 46 percent since the years immediately preceding World War II, whereas per capita consumption of red meats has risen only 14 percent. What accounts for this increasing importance of poultry products, in relation to red meats, on the American dining table?

Generally, the answer that would be given by a marketing specialist is that the competitive position of poultry products in relation to red meats has improved greatly in recent years. Specifically, the greater increase in consumption of poultry products than in red meats is a reflection of:

1. Poultry producers evidently have been improving the efficiency of production more than have livestock producers. This is borne out by the fact that prices paid producers for poultry products have increased considerably less than those paid livestock producers.

2. Poultry products have become a better and better "buy" and consequently have improved their position in competing for the consumer's food dollar. While poultry product prices rose along with other commodities during the period under consideration, the amount of this increase at retail was less than that for red meats. As a result, the wages for an hour of labor has increased in purchasing power for poultry products more than for red meats.

Favorable Trend Is Continuing

These changes, coupled with improvements in poultry production, processing, marketing, and end product quality during recent years, indicate that the competitive position of poultry products in relation to red meats not only has improved considerably, but that this trend is one which can be expected to continue.

Another factor that should be considered in connection with the competitive position of poultry and red meats is that of marketing charges or margins. Here the picture is not so favorable for poultry products on the basis of available data, but there are other elements entering this situation which will be discussed later.

Data on the major factors reflecting the changing relationship of poultry products and red meats (1) per capita consumption, (2) prices

paid producers, (3) retail prices, and (4) marketing margins have been brought together in the table on page 5.

Changes in per capita consumption from 1935-39 to 1950-53 (Part A of table) were as follows: Turkeys gained 96 percent, chickens 65 percent, eggs 34 percent, pork 22 percent, beef and veal 12 percent; while lamb and mutton decreased 40 percent. Where poultry and eggs constituted 31 percent of the total per capita poundage of meat and eggs consumed during the pre-World War II period, this figure rose to 37 percent during the years 1950-53. In the prewar period turkey consumption at 2.6 pounds per capita was far under lamb and mutton at 6.7 pounds, but in the more recent period turkey consumption had jumped to 5.1 pounds while lamb and mutton was off to 4 pounds.

Producer Prices Point Up Production Efficiencies

The great increase in efficiency in poultry and egg production, which has made larger supplies available at increasingly favorable prices, is pointed up by the change in prices to producers in recent years compared with those prior to World War II (Part B of table). Prices paid producers for poultry products increased far less than the farm price of meat animals. Farm prices during the 1950-53 period for beef, lamb, and pork were 257, 221, and 134 percent above prewar respectively. In contrast, producer prices of chickens, turkeys and eggs were up 69, 97, and 108 percent, respectively.

When the increase in consumption of poultry products is considered in connection with this smaller increase in farm prices, it seems fair to conclude that production efficiency has improved more for poultry than that for red meats and that poultry producers are in a better competitive position to bid for a larger share of feed, labor, and other resources.

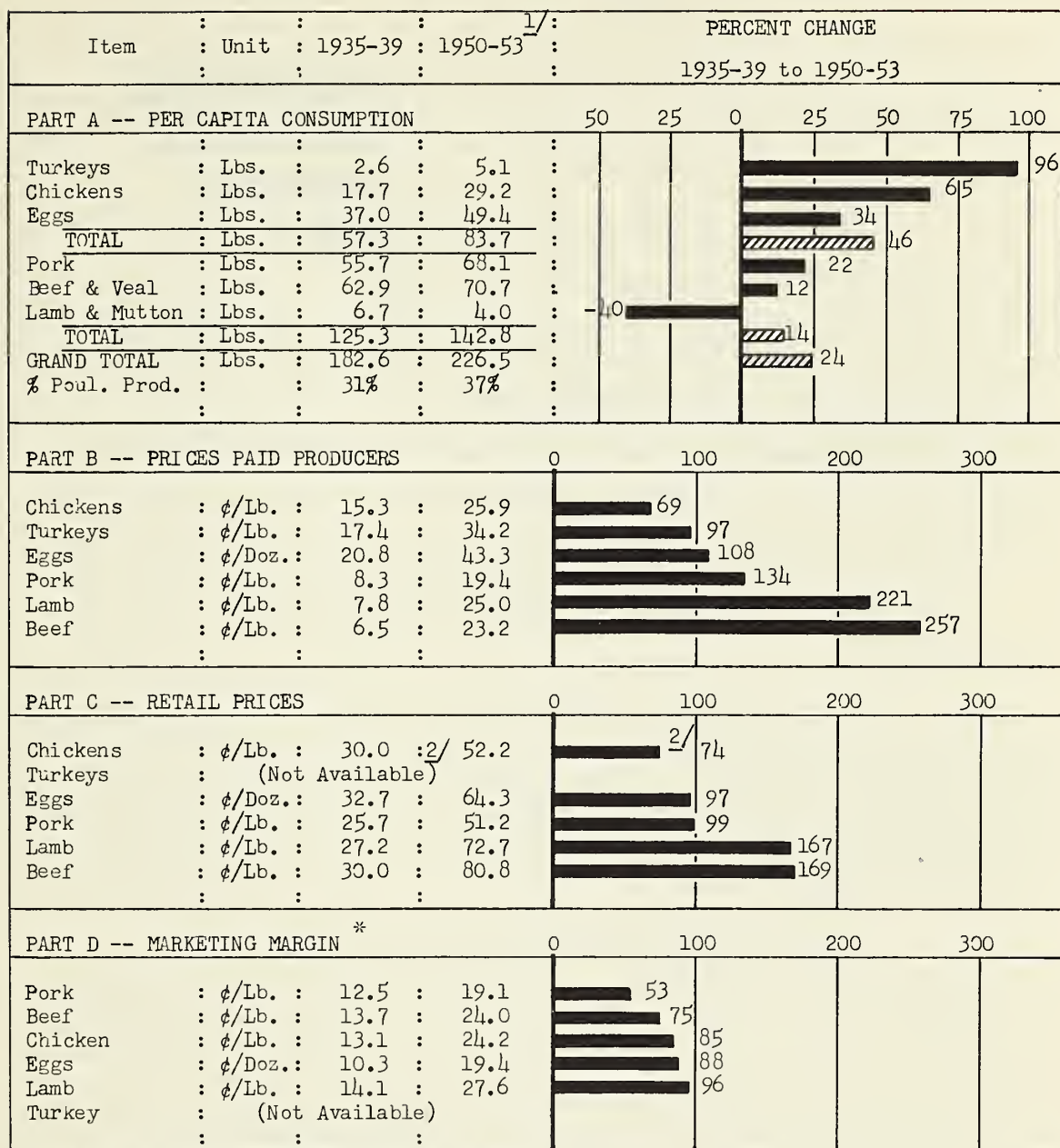
Retail Price Increases Less For Poultry

More important in explaining changes in per capita consumption, however, are prices at the retail counter where poultry products have improved their competitive position relative to red meats in recent years (Part C of table). Comparing the pre-World War II period with recent years, retail prices of chicken (based on broiler and fryer prices) were up only 74 percent, compared with an increase of 169 percent for beef and veal. The increase for pork, 99 percent, was slightly above eggs at 97 percent. It is felt that any inadequacy of this basic data due to changes in products offered at retail would, if corrected, show that poultry products have improved their competitive position even more than indicated. Poultry products certainly have grown out of the luxury or "special occasion" class and are drawing far more buyers than during the prewar years.

Marketing Margin Data Inadequate

In regard to marketing charges, or margins, poultry and egg products have not improved their competitive position on the basis of data available for analysis (Part D of table). However, these data on marketing

COMPARATIVE DATA RELATING TO THE COMPETITIVE POSITION
OF THE POULTRY INDUSTRY



Prepared from basic data available in USDA.

* Marketing Margin represents the difference between the retail price per unit and the farm value of the amount of product required to provide one retail unit. Dressing shrink, losses in the marketing channel and byproduct values are reflected in the farm value. Thus farm value of product required to give a retail unit is greater than farm prices indicated in Part A.

^{1/} Preliminary

^{2/} Fryer and broiler price

MEAT AND EGGS AT RETAIL PRICES THAT COULD BE PURCHASED PER HOUR OF LABOR

Commodity	Unit	1930-1939 avg.	1940-1949 Avg.	1950-1953 Avg.	1/1953	PERCENT CHANGE 1930-39 to 1950-53
						0 25 50 75 100
Turkeys	Lbs.	1.6*	2.1	2.8	3.2	74
Chickens	Lbs.	1.8	2.4	3.0	3.1	67
Eggs	(Doz.)	1.7	2.0	2.6	2.6	53
	(Lbs.)	2.6	3.0	3.9	3.9	
Pork	Lbs.	2.4	2.9	3.2	3.3	33
Lamb	Lbs.	2.1	2.4	2.2	2.7	5
Beef	Lbs.	1.9	2.3	1.9	2.5	0

Prepared from basic data available in AMS, USDA.

(Hourly Earnings--U. S. Dept. of Labor)

(Retail Prices: For Turkeys, 1940 to Date--Urner Barry's "Special Weekly Report."

(Other commodities--AMS, USDA)

*Approximated.

Note: Retail price information for chickens and turkeys was on N.Y. dressed basis.

The amounts an hour of labor would buy should not be interpreted as an indication of which product is the "Best Buy." The comparison is presented to give what is considered a fair indication of relative changes.

1/ Preliminary.

margins are far from adequate. Such information to some extent reflects changes in the form and quality in which the product is marketed and the added services rendered. Such changes have been far more marked for poultry meat than for the other items compared. If facts were available for comparable products and services rendered, it is likely that poultry and eggs would show up more favorably.

Hour-of-Labor Purchasing Power Compared

Changes in the amount of poultry and red meat products that could be purchased with an hour of labor are shown in table on this page. Comparing the prewar period with recent years two-thirds more turkey and chicken could be purchased with an hour of labor, a little over half as much again of eggs, and a third more of pork. In contrast there was little change in the amount of beef and lamb that could be obtained. In this connection, it is well to point out that more abundant supplies and lower prices of beef resulted in more of this product for the wages of an hour's labor last year and this situation has carried on into 1954.

Meanwhile, continuing improvements in production, processing, marketing and quality of poultry products should help the industry maintain its competitive position.

Changes in Poultry Production and Processing

The production trend is toward operations on a larger scale, with

less seasonality and, consequently, more efficient utilization of resources. There has been constant improvement in breeding, feeding, and protection of poultry and in handling equipment and management practices.

From the processing standpoint, increased size of producing units and greater concentration of production have made possible larger and more efficient processing operations. Here, too, there has been considerable improvement in equipment and handling and in methods of marketing poultry products.

Room for Improvement in Marketing

In the marketing field, while there have been improvements, much still can be done to increase availability of poultry - more days in the week, more weeks in the year, in more retail outlets, and in the different forms which consumers want, such as cut-up poultry, and fresh, frozen and processed products. The big changes that have taken place in processing and marketing can be expected to continue because both the industry and equipment manufacturers are becoming more and more interested in processing and handling improvements. In merchandising and promotion work, the industry has only recently begun to move, but the keen competition that exists appears to insure further improvement in these fields.

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PUBLICATIONS AID IN PLANNING GRAIN STORAGE

With a potentially serious situation in grain storage indicated for harvest time this year, the U.S. Department of Agriculture is urging farmers and others to anticipate requirements and plan now for adequate space when it will be needed. In connection with this "preparedness" program there are available from the Office of Information, USDA, several publications which should be helpful. Here are a few of them:

The current (March 1954) issue of "The Agricultural Situation," AMS, contains a comprehensive summary of specific types of assistance made available by the Federal Government to farmers and commercial firms to help them expand grain storage space.

Basic information on construction of on-farm grain storage facilities is given in Farmers' Bulletin No. 2009, "Storage of Small Grains and Shelled Corn on the Farm." This publication also lists plans for grain bins which are available from State extension services or county agents.

Conditioning and protection of farm stored grain are covered by the following: Leaflet No. 314, "Inclined-Column Grain Dryer"; Leaflet 331, "Drying Shelled Corn and Small Grain with Heated Air"; Leaflet 332, "Drying Shelled Corn and Small Grain with Unheated Air"; Leaflet 333, "Drying Ear Corn with Heated Air"; and Leaflet 334, "Drying Ear Corn with Unheated Air." Pest control in stored grains is covered in Farmers' Bulletin 1260, "Stored-Grain Pests", and in Leaflet 345, "Insects in Farm-Stored Wheat."

Prepackaged Lettuce Is Preferred, But-

By Russell L. Hawes and Donald R. Stokes

Preliminary studies show that many housewives prefer prepackaged lettuce, but they will resist an additional cost of only one cent for the prepackaged product over non-packaged when both are available in the same retail store.

This may appear to be drawing it pretty fine, but these are the highlights of findings in recent studies, made by the U. S. Department of Agriculture in cooperation with the United Fresh Fruit and Vegetable Association, of prepackaging head lettuce in retail stores.

Prepackaging lettuce at retail is becoming increasingly popular. It makes possible the displaying and handling of lettuce under more sanitary conditions and helps keep down waste and spoilage losses. Although prepackaging costs more, retailers report that consumers are more satisfied because of the sanitation advantage and because the lettuce stays crisp in moisture-proof bags - both in the store and in home refrigerators.

Many retailers, however, have had doubts as to whether prepackaging pays - whether increased packaging material and labor costs can be offset by reduction of waste and spoilage losses and whether the prepackaged product will increase sales.

It was to answer some of these questions that the tests were set up to compare consumer preference and costs of retailing packaged and non-packaged lettuce. These were actual in-store surveys in two self-service supermarkets in Washington, D. C. suburbs. As a supplement, USDA marketing specialists interviewed produce merchandisers of 8 mid-western food chains as to their experiences with lettuce prepackaging. In another phase of the study, USDA personnel compared the efficiency of two types of "funnels" now used for prepackaging lettuce. All these studies were limited and no final conclusions were reached, but the findings should be of interest and are being made available pending expected additional study. The work was done under the authority of the Agricultural Marketing Act of 1946.

In the actual in-store tests, the findings, briefly, were as follows:

1. Bulk display lettuce outsold prepackaged lettuce in one store by a ratio of more than 2 to 1 when a 1-cent per pound premium was charged for the prepackaged lettuce. The non-packaged lettuce display was usually larger than the prepackaged display, which may have been a factor influ-

encing more sales from the bulk display.

2. In another store, when the price per head of the prepackaged and nonpackaged lettuce was the same, the packaged lettuce accounted for 56 percent of total sales.

(In both these tests, sales of the prepackaged lettuce in the final week of sale were higher than during the first week.)

3. Waste and spoilage losses of prepackaged lettuce were materially less than for non-packaged lettuce, principally because the bag protects the lettuce from rough handling by store customers. These savings in lower spoilage losses averaged about 8 cents per dollar of sales.

4. The cost of packaging and retailing lettuce in printed film bags was greater (5 cents per sales dollar) than for non-packaged lettuce. The added cost of printed film bags, together with a slight increase in the cost of labor, more than offset the substantial savings effected through a reduction in waste and spoilage losses of the prepackaged lettuce.

While in both tests it was found that it cost about 5 cents more per dollar of lettuce sales for prepackaged over bulk, the tests were experimental and store personnel may become more efficient in prepackaging with more experience. Then, too, some retailers use personnel during slack periods for prepackaging. In the tests, bag costs were based on use of 3-color printed film, although many retailers use less costly plain bags. Therefore, it is questionable whether some retailers prepackaging lettuce find it necessary to charge for the service.

Chain Store Experiences With Prepackaged Product

The survey of the eight midwestern chain stores which were prepackaging lettuce in their retail outlets revealed the following:

1. Six of the 8 firms interviewed had been prepackaging lettuce for more than two years.

2. All of the firms interviewed reported that their lettuce sales had increased as a result of prepackaging.

3. Four firms offered customers only prepackaged lettuce; the others sold both prepackaged and non-packaged lettuce under varying circumstances.

4. Customers patronizing these organizations were in favor of prepackaged lettuce because of the sanitation advantage, convenience in home storage and quality preservation.

5. Only one of the eight firms charged a higher price for prepackaged lettuce than for non-packaged lettuce.

6. Film bags measuring 6" x 4" x 9" were used by the majority of these firms. Most firms used plain or unprinted cellophane bags. The bags were generally closed.



This is a prepackaged head of lettuce such as used in the tests discussed in the article. The bag, made of semi-moisture proof cellophane, measures 6" x 4" x 9". It was printed in three colors and labeled with the United Fresh Fruit and Vegetable Association's "V-plus" brand name, giving it the appearance of an ordinary commercial package rather than a test or experimental item. No signs, posters, or other information were shown to store customers informing them of the tests.

7. The majority of the stores packaged their lettuce by hand - some of them had used funnels or bagging chutes of various types.

8. Waste and spoilage losses were considerably reduced, although complete costs of retailing prepackaged lettuce as compared with retailing non-packaged lettuce had not been determined.

9. The majority of these firms preferred to receive their lettuce in fiberboard cartons rather than in wood crates.

Need for the development of an improved type of device for bagging lettuce was reported as the result of the study of two types of such equipment now in use.

Continuous Refrigeration

Beats Rapid Handling

Refrigeration at all stages of egg handling - from the hen to the consumer - is necessary if a top quality product is to be marketed. Further proof of this has been developed through research; this time in a study made by the Agricultural Experiment Station at the State College of Washington, under contract with the U. S. Department of Agriculture.

It was found that the only alternative to continuous refrigeration - but a "poor substitute" - was rapid handling. The study developed that while farm refrigeration of eggs insures high quality, refrigeration throughout the other stages of marketing is even more important if the benefits of farm cooling are to be passed on to the consumer.

Study was made of eggs from two commercial farms during the summer months when temperatures ranged from the low 70's to the high 80's in daytime and evening temperatures were usually below 70 degrees Fahrenheit and as low as 55 degrees. Eggs were checked on each farm under refrigerated and non-refrigerated conditions. After delivery to first receivers both candled grade and internal quality of the eggs were determined from random samples. The farm-stored lots of eggs were then divided so that half of the eggs were refrigerated and half were not during movement through wholesalers, jobbers, and retail outlets. Speed of movement was controlled at either 2 days or 4 days at each step in marketing for different lots of eggs.

While the quality of eggs tested was determined both by candling and broken-out appearance during the study, the findings were reported on the basis of broken-out appearance - the way most housewives judge egg quality.

Quality of the broken-out eggs was determined in Haugh units -- a system in which the height of the firm albumen is compared with the albumen width and the weight of a given egg. (Grade AA eggs range from 79 to 110 Haugh units, depending upon egg size or weight, and grade A eggs range from 55 to 79 Haugh units.)

In one phase of the study, eggs were collected from the farms once a week and moved through marketing channels with 4 days delay at each of the 3 handling agencies. On the day they were laid, the eggs studied had a Haugh unit value of about 82. When they were held under refrigeration on the farms, the average Haugh unit rating of eggs from 1 to 7 days old was 76. Where eggs were held in non-refrigerated farm storage the rating dropped to 70 - clearly indicating the benefits to be obtained from farm cooling.

When eggs were moved through marketing channels under refrigeration they left the retail store 12 days after delivery to the first receiver and had Haugh unit values still very close to 70. But, eggs handled through the same marketing channels, during the same period of time, without refrigeration, dropped in quality to a Haugh unit value of 50, or B quality eggs. This was a loss of 32 Haugh units for non-refrigerated eggs compared with a 14 Haugh unit loss with complete refrigeration. This was true whether the eggs had been refrigerated on farms or not - showing the need for refrigeration during all phases of marketing if the benefits of farm cooling are to be carried through to consumers.

In the phases of the study dealing with eggs picked up twice weekly from farms and for eggs moving through the same marketing channels with only two days delay at each handling agency the general picture was similar to that outlined above.

The quality of eggs marketed twice weekly without farm refrigeration almost paralleled that of eggs marketed once weekly under refrigeration. In fact, eggs collected from farms without refrigeration twice weekly - and then placed under refrigeration during all the rest of the marketing movement reached consumers with a quality comparable to eggs refrigerated on the farm and all during marketing but collected from farms only once a week. It is well to point out here, however, that the air temperatures under which the tests were conducted - particularly the evening temperatures - often approached that found under refrigeration and were fairly low compared with those in a number of other egg producing States.

The study indicated that with adequate farm refrigeration at about 50° F. it is possible to hold eggs for periods up to a week and still have eggs as good or better than those marketed after holding only 3 days without refrigeration. Naturally, eggs marketed twice weekly after refrigeration on farms and throughout marketing channels were of superior quality.

This study was made at the Agricultural Experiment Station at the State College of Washington by W. J. Stadelman, E. L. Baum, H. G. Walkup, and J. G. Darroch, all of that college. The USDA contract for the work was administered by Dr. Edwin H. Matzen, Poultry Section, Marketing Organization and Costs Branch, Marketing Research Division, Agricultural Marketing Service.

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"CHIPPER" SPUDS

Answers to some of the raw material problems of potato chippers are given in a recent circular (No. 936) issued by USDA. Based on a 3-year study, the pamphlet covers the chipping quality of 8 potato varieties as affected by source (of production) and by storage treatment. Of the 8 varieties tested, Russet Burbank ranked first and Russet Rural, second for potato chip making. The other varieties tested were Irish Cobbler, Katahdin, Sebago, Chippewa, Green Mountain, and White Rose.

Apt Pupils Find Poultry "Schools" Pay

By Dr. Harold D. Smith and Earl H. Rinear

Retailers adopting the improved methods of merchandising poultry demonstrated through training classes sponsored by the U. S. Department of Agriculture should be hearing a more frequent ringing of their cash registers. A recent study made for the Department by the University of Maryland showed this to be the case in Baltimore and Frederick, Md.

The study marked the first time a before-and-after survey has been made to determine just what influence the poultry-merchandising training has on sales as well as store practices of those retailers who send trainees to the classes. It covered both retailers who did and those who did not send personnel to the merchandising "schools." Generally, it showed that those retailers who sent personnel to the training classes and adopted the improved merchandising methods not only increased their poultry product sales, but their sales jumped substantially over retailers who did not take advantage of the "schools."

These merchandising "schools," conducted by the Poultry and Egg National Board under contract with USDA, are designed to teach the latest techniques in poultry merchandising to both retailers and wholesalers. Since they began in January 1951 ("Training Sparks Poultry Sales," Marketing Activities, January 1951) they have been offered in many areas of the United States. To date, approximately 17,000 eligible trainees have attended the schools which have been held in 38 States so far.

The only study of the effect of the training classes made by the Department previously was in St. Louis, Mo., some time after the classes had been held there. While that study showed that retailers who attended the schools benefitted from the classes there was no way of comparing the effect on a before-and-after basis. ("Poultry School Results," Marketing Activities, April 1953.)

When it became known that the classes were to be offered in Maryland (where over 500 wholesalers, retailers and processors of eggs and poultry attended them in 6 major cities), USDA entered into a contract with the Department of Agricultural Economics of the University of Maryland to make a before-and-after survey in the cities of Baltimore and Frederick.

During the course of the study, 204 stores were surveyed in the two cities just prior to and again 3 months after the courses were held. Of this total, 53 stores (17 chains, 25 independents in Baltimore, and 11 independents in Frederick) sent 120 trainees to the merchandising classes--an average of better than 2 trainees per store.



This is a photograph of a Poultry and Egg National Board "school" in session.

Here the instructor is demonstrating the improved method of cutting up a chicken for retail sale.

In each local area the PENB "schools" have been sponsored by groups of processors, wholesalers, State agencies, cooperatives or other producer organizations which have furnished all materials and facilities for the classes.

The survey made before the training classes were held indicated that a large percentage of the stores already were buying eggs and poultry according to grade and that nearly all stores had displays of frozen poultry. In Baltimore, 99 of the 138 independents studied and all of the chain stores there kept eggs refrigerated, but in Frederick only one-fourth of the stores refrigerated eggs.

In the "after" survey, made to determine what changes retailers had made in merchandising practices that could be attributed to the training classes, stores which sent no trainees also were studied to furnish a check group.

Of the 53 stores that had trainees at the classes, 26 stores, or 49 percent, changed handling or merchandising practices. In the group which

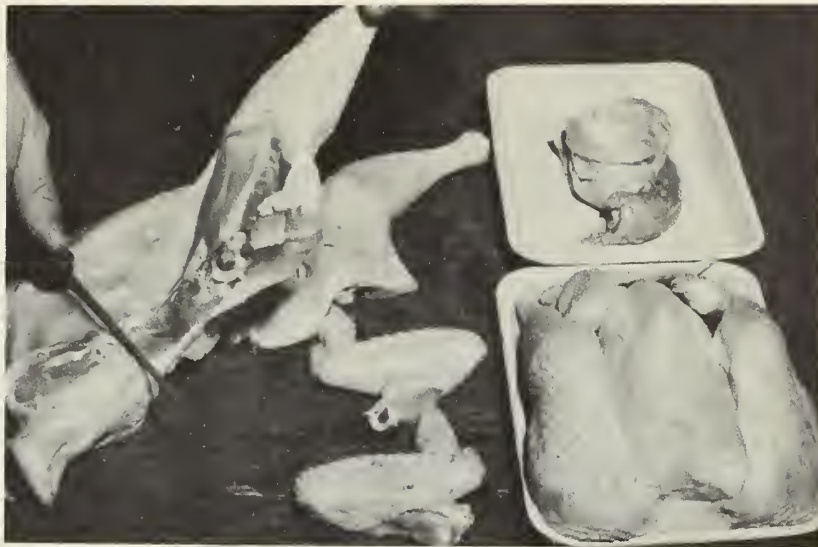
In this photograph the trainees are "learning by doing." The classes cover not only improved methods of cutting up poultry, but also the pricing of the various types of cut-up product and how to package it. Trainees also are taught how to ice, display, and advertise poultry with special attention to tie-in sales.



"Students" also learn how to judge quality of eggs, to keep them refrigerated, and to reorder eggs at least twice weekly, whenever this is possible.

Here the correct method of cutting up a broiler or a fryer so as to leave the "oyster" on the leg is being demonstrated by the instructor.

In the cardboard trays to the right are (front) a cut-up bird ready for wrapping and (back) the beginning of a new package with the wax paper-wrapped giblets and neck already in position.



did not send trainees (151 stores) 15 percent also had made changes. More of the chain stores made changes than independents in proportion to the number of trainees attending the classes.

Practices that were changed by most stores were the method of cutting up chicken and the frequency of delivery of poultry products to the stores. Of the 53 stores with trainees, 20 changed their methods of cutting up chicken - a practice given major emphasis in the training course. Retailers apparently need more frequent delivery of poultry products to their stores judging from the fact that eggs were delivered every three days after the course as compared with an average of $4\frac{1}{2}$ days previously. Frozen chickens were delivered weekly after the training period instead of every 12 days as they had been prior to then. Both of these changes naturally improved the quality of the products sold by the stores. Other changes made included use of a cost chart to compute prices of cut-up poultry, refrigeration of egg displays, and better arrangement of poultry displays.

Poultry sales increased for those who attended the course and subsequently changed their practices. Much of the increase was attributed to the change made in the method of selling cut-up chicken and the use of the cost chart in determining the various prices of chicken parts. Chicken sales increased an average of 73 pounds, turkey 25 pounds, and eggs 12 dozens per store in one week for the group that attended the course and made changes (26 stores). In stores where there were no trainees and no changes were made chicken sales increased only 6 pounds, turkey sales decreased 5 pounds and sale of eggs increased 9 dozens per store (one week). The weekly dollar sales of poultry products increased an average of \$55.48 per store for those that had trainees and made changes, compared with an average of only \$2.33 per store for those that had no trainees and made no changes.

Results of this study are published in "Effects of Merchandising Schools on Retail Practices and Sales of Poultry and Eggs," University of Maryland Agricultural Experiment Station Bulletin 447.

Economic Trends In Ornamental Horticulture

By Truman Fossum

Ornamental horticulture is that branch of the horticultural specialties industry which includes commercial nurseries producing trees, plants, and shrubs and commercial bulb farms. In recent years, the ornamental horticulture trade has had an annual business of over \$500,000,000 and has furnished employment for nearly 100,000 workers with a total annual payroll of well over \$100,000,000. Ornamental horticulture has been a trade of tremendous changes. Since 1900, U. S. nurserymen have switched from importers of ornamentals to producers of practically all products they sell. There also have been decided shifts in the economic importance of products grown by the trade. About the time of World War I, the most important products were fruit tree stocks and related items such as small fruit plants and berry bushes. In recent years, ornamentals, including bulbs, have accounted for about 90 percent of the trade's wholesale business, with fruit tree stocks and related items off to about 10 percent. Below is the second of a series of preliminary economic studies of the horticultural specialties industry. It covers certain economic trends in the ornamental horticulture trade which have been analyzed for the first time by the Special Crops Section, Marketing Organization and Costs Branch, Agricultural Marketing Service, USDA. Other studies will be made public as the analyses are completed.

The past 15-year period has been one of steady change for commercial growers of nursery and bulb crops who engage in the wholesale marketing of their products. The outstanding trends have been a sharp increase in total wholesale business - more than triple from 1940 through 1952 - and the increasing importance of ornamental woody plants to this total business, as fruit tree stocks and related items have lost ground.

These and other changes in production, marketing, and transportation in the ornamental horticulture trade are shown in a recent preliminary study made by USDA. Marking the first time such information has been assembled and analysed, the study covered only the wholesale business of commercial nurserymen and bulb growers. A similar study was made for commercial flower growers ("Flower Wholesaling Trends," Marketing Activities, January 1954) and another is in progress for wholesale merchants in the horticultural specialties industry.

Sales

Commercial nursery stock and bulb growers who sold their crops at wholesale did about 70 percent of their business through that form of marketing. However, since 1940, retail sales of these same growers have

shown a slight but consistent increase. Total wholesale business of the growers covered by the study rose from \$6,904,000 in 1940 to \$11,585,000 in 1945 and then reached \$21,879,000 in 1952, an increase of about 220 percent over the entire period. (See table, page 18.)

Commodities

As noted above, a very apparent trend in the trade has been the increasing importance of production of ornamental woody plants and, inversely, the decline in fruit and nut trees and small fruit plants. (This is shown in both the dollar "value" and "distribution" columns of the table on page 18.) Ornamental woody plants rose from 60 percent of total distribution in 1940 to 68 percent in 1952, whereas the comparable figures for fruit and nut trees and small fruit plants showed a decline over the same period - a continuation of a trend that began in 1920. Other notable changes were in planting stock, which accounted for nearly 6 percent of the total distribution of reporting growers in 1940 and which had risen to more than 8 percent in 1952, while over the same period, bulbs (major part of "other" in the "item" column) decreased from 12 to 9 percent of total distribution.

Wholesale Outlets

Except for the war (World War II) and immediate postwar years, the wholesale sales of commercial growers of nursery and bulb crops to other wholesalers, who either needed the commodities or held them before reselling, have consistently amounted to about 22 percent. The percentage of sales made to sales yards increased from 25 percent of total distribution in 1940 to 31 percent in 1952. Since the end of World War II, wholesale sales to landscapers and department stores, respectively, have been about 12 percent of total distribution. Wholesale sales to mail order houses, wholesale florists, and wholesale dealers were off slightly during the period covered by the study. (More detail in table, page 18.)

Transportation

The percentage of growers who own their own trucks has changed very little since 1940. In that year it was 14.6 percent and by 1952 it had risen to only 15 percent. There was a substantial increase in the percentage of growers patronizing trucking companies - from 16 percent in 1940 to well over 30 percent in 1952 - and a slighter but marked increase in those using hired or leased trucks. Use of rail freight was off substantially and use of rail express was down somewhat less over the period covered by the study. Some air shipments began in 1945, but they were still slight (1.2 percent of total distribution) in 1952.

This initial economic study of the ornamental horticulture trade is based on information received from commercial nurserymen and bulb growers engaged in wholesaling. Reports were received from about one-third of the establishments sampled and those reporting represented about one-half of the wholesale sales of the group sampled. In addition to a study of horticultural specialties wholesalers now underway, a final, more detailed report for all major classifications of the industry is planned.

Ornamental horticulture: Growers reporting and value of wholesale business, by commodities, wholesale outlets and kind of transportation, specified years, 1940-52

Commodity

Item	1940		1945		1950		1952	
	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution
	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent
	Num-ber		Num-ber		Num-ber		Num-ber	
Planting stock	31	5.8	35	702	39	1,395	38	1,786
Cut flowers, greenhouse	3	.2	2	11	2	20	2	24
Potted plants, greenhouse	3	.2	3	18	4	95	3	49
Cut flowers and greens, outdoors	5	.6	6	68	7	76	8	96
Perennial herbaceous plants	14	3.4	17	361	17	515	16	626
Ornamental woody plants	55	60.1	64	6,703	69	11,487	72	14,823
Fruit and nut trees	29	15.2	30	1,782	30	1,733	33	2,040
Small fruit plants	19	2.6	20	325	20	470	20	464
Other	18	11.9	20	1,615	21	1,760	22	1,971
Total wholesale business	73	100.0	81	11,585	86	17,551	90	21,879

Wholesale Outlet

	1940		1945		1950		1952	
	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution
	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent
	Num-ber		Num-ber		Num-ber		Num-ber	
Wholesale florists	4	.4	4	54	5	38	5	35
Wholesale dealers	24	8.7	26	1,077	29	1,261	30	1,346
Wholesale growers	46	22.2	49	2,185	51	3,638	54	4,827
Retail florists	15	3.6	17	359	16	493	17	511
Sales yards	58	25.3	63	3,240	70	5,284	73	6,795
Landscapers	50	14.8	57	1,464	61	2,224	62	2,694
Department stores	28	11.8	35	1,432	42	2,121	42	2,665
Mail order houses	25	9.6	26	1,302	27	1,657	29	1,936
Other	21	3.6	25	472	25	835	25	1,070
Total wholesale business	73	100.0	81	11,585	86	17,551	90	21,879

Kind of Transportation

	1940		1945		1950		1952	
	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution	Re-ports	Dis-tribution
	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent	Value: 1000 dollars	Percent
	Num-ber		Num-ber		Num-ber		Num-ber	
Own trucks	50	14.6	56	1,542	61	2,472	63	3,291
Hired or leased trucks	25	4.5	29	844	32	2,083	35	2,653
Trucking companies	49	16.0	56	2,559	64	4,695	65	6,688
Bus companies	-	-	1	1	2	7	2	8
Parcel post	36	5.9	40	688	47	997	50	1,255
Rail express	57	17.2	64	1,793	68	2,171	72	2,272
Rail freight	46	36.1	52	3,616	59	3,940	59	4,070
Air	-	-	2	5	11	116	13	256
Other	16	5.7	19	537	22	1,070	25	1,386
Total wholesale business	73	100.0	81	11,585	86	17,551	90	21,879

ABOUT MARKETING

The following addresses and publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

Addresses:

Statement of O. V. Wells, Administrator, and N. M. Koffsky, Associate Chief, Statistical and Historical Research Branch, AMS, before the Joint Committee on the Economic Report, Feb. 11, 1954. 2 pp. (USDA) (Processed)

Talk by H. L. Forest, Director, Dairy Division, before the National Dairy Council, Memphis, Tennessee, Jan. 27, 1954. 6 pp. (AMS) (Processed)

Publications:

Cabbage, Sweet Peppers, and Shallots (1951-52 Season). An Agricultural Marketing Act of 1946 (RMA, Title II) Contract Report. Dec. 1953. 44 pp. (AMS) (Processed)

Chicks Placed Weekly in Important Broiler Areas in 1953. Feb. 3, 1954. 5 pp. (AMS) (Processed)

Farmers Use More Electricity But Average Cost Per Kilowatt-Hour Lower. Jan. 29, 1954. 2 pp. (AMS) (Processed)

Purchases of Frozen and Canned Foods by Urban Families as Related to Home Refrigeration Facilities. Marketing Research Report No. 60. Feb. 1954. 14 pp. (AMS) (Processed)

Analytical Tools for Measuring Demand. Agriculture Handbook No. 64. Jan. 1954. 86 pp. (AMS) (Printed)

Farm Mutual Reinsurance. Agriculture Information Bulletin No. 119. Dec. 1953. 56 pp. (Agricultural Research Service) (Printed)

Livestock and Poultry on Farms and Ranches, January 1 (by States). Feb. 12, 1954. 28 pp. (AMS) (Processed)

Wool Production and Income, 1952-1953. Feb. 25, 1954. 2 pp. (AMS) (Processed)

Livestock Marketing in the Southern Region. Southern Cooperative Series Bulletin 26. July, 1952. 102 pp. (AMS) (Printed)

Milk Production On Farms and Statistics of Dairy Plant Products 1953. Feb. 1954. 46 pp. (AMS) (Processed)

The Wholesale Produce Market At Birmingham, Ala. Jan. 1954. 49 pp. (AMS) (Processed)

The Causticaire Method for Measuring Cotton-Fiber Maturity and Fineness: Improvement and Evaluation. Dec. 1953. 62 pp. (AMS) (Printed)

Chipping Quality of Eight Potato Varieties as Affected by Source and by Storage Treatment. Circular No. 936. 12 pp. (USDA) (Printed)

List of Plants Operating under the Poultry and Poultry Products Inspection and Grading Programs. Jan. 1954. 54 pp. (AMS) (Processed)

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